Session Description Protocol (SDP)
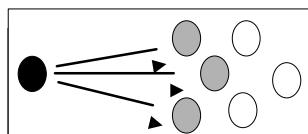
RFC 2327

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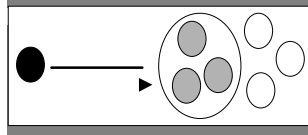5. SDR View of SDP Announcements
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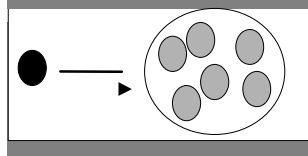
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1. Introduction

Multicast :

- Unicast　:

- Multicast　:

- Broadcast　:

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1. Introduction (2)

IP Multicast :

- One-to-Many Communication or Many-to-Many Communication
- Efficient Use of Network Infrastructure
  – Single Packet, Multiple Destinations
  – IP packet replication (routers, when needed!)
- Multimedia Application
  – QoS and CoS capable networks
- ISP Multicast Support

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1. Introduction (3)

- Virtual Network of the Multicast Backbone (Mbone)

Multicast Island
Unicast Tunnel
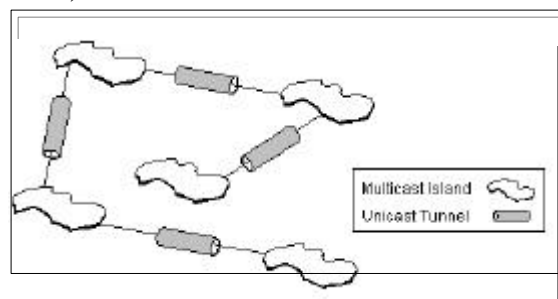
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1. Introduction (4)

- Routing protocol for multicasting: DVMRP (Distance Vector Multicast Routing Protocol), PIM (Protocol Independent Multicast), MOSPF (Multicast OSPF) etc.


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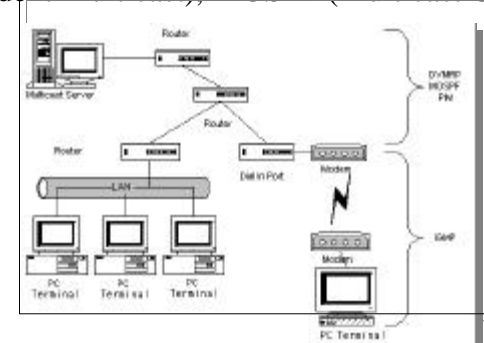
2. SDP

- SDP is designed to convey session information to prospective participants
- SDP is purely a format for session description - it does not incorporate a transport protocol
- Transport protocol: Session Announcement Protocol (SAP), Session Initiation Protocol (SIP), Real-Time Streaming Protocol (RSTP), Email using MIME extensions and HTTP

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2. SDP (2)

- Multicast Announcements
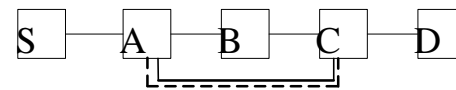
- S-to-D: SAP Header | text payload
- A-to-C: SAP Header | SAP Header | text payload

  ➢ SAP Header: IP address of Class D; 224.0.0.0 to 239.255.255.255
  ➢ Text payload: an SDP session description

- Email and WWW Announcements
  The MIME content type "application/sdp" should be used

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2. SDP (3)

- Information conveyed
  - Name and purpose of session
  - Time(s) the session is active
  - The media comprising the session
  - Information to receive those media
- Some additional information
  - Information about the bandwidth to be used by the conference
  - Contact information for the person responsible for the session

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3. Multicast SDP Announcements

- Session Description
  - **v** = (protocol version)
  - **o** = (owner/creator and session identifier)
  - **s** = (session name)
  - **i** =* (session information)
  - **u** =* (URI of description)
  - **e** =* (email address)
  - **p** =* (phone number)
  - **c** =* (connection information)
  - **b** =* (bandwidth information)
  - **z** =* (time zone adjustments)
  - **k** =* (encryption key)
  - **a** =* (zero or more session attribute lines)

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3. Multicast SDP Announcements(2)

- Time Description
  - **t** = (time the session is active)
  - **r** =* (zero or more repeat times)
- Media Description
  - **m**= (media name and transport address)
  - **i** =* (media title)
  - **c** =* (connection information)
  - **b** =* (bandwidth information)
  - **k** =* (encryption key)
  - **a** =* (zero or more media attribute lines)

Syntax Rules of SDP Announcements and SDP Grammar given in Appendix A and Appendix B respectively

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4. SDP Announcements: Example

v=0
o=armin 3154307298 3154307432 IN IP4 133.5.22.66
s=SDP Test in Thunder
i=This is only a test in SDR for using SDP to announcing a session.
u=http://www.csce.kyushu-u.ac.jp/~armin/SDPThunder.txt
e=Armin Lawi <armin@thunder.csce.kyushu-u.ac.jp>
p=Armin Lawi +81-92-6423867
c=IN IP4 239.255.43.180/15

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4. SDP Announcements: Example(2)

t=3154305600 3154489200
r=1d 3h 0
a=tool:sdr v2.4a7
a=type:meeting
m=audio 17760 RTP/AVP 0
c=IN IP4 239.255.43.180/15
a=ptime:40
m=video 62978 RTP/AVP 31
c=IN IP4 239.255.152.148/15
m=whiteboard 46510 udp wb
c=IN IP4 239.255.246.30/15
m=text 51400 udp nt
c=IN IP4 239.255.58.76/15

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5. SDR View of SDP Announcements
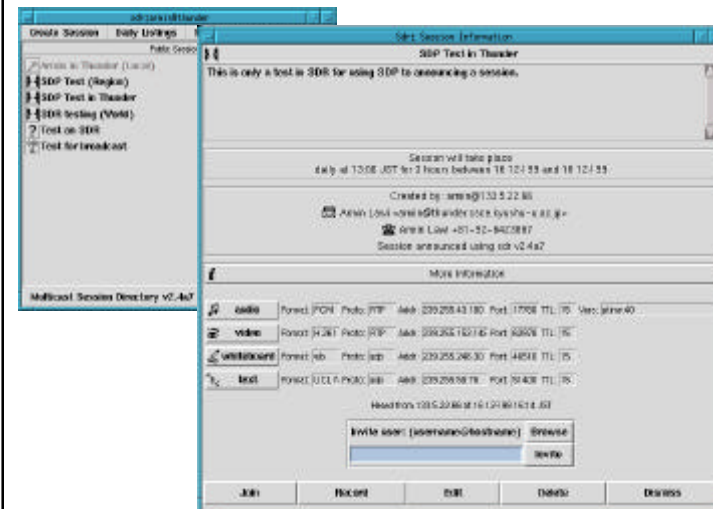
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6. Conclusions

- The Session Description Protocol (SDP) is an ASCII text based protocol for describing multimedia sessions and their related scheduling information.
- The purpose of SDP is to convey information about media streams in multimedia sessions to allow the recipients of a session description to participate in the session.
- SDP is primarily intended for use in a internetwork, although it is sufficiently general that can describe streams that exist for a duration time.
- Media streams can be many-to-many

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